

## **REMARKS**

### **I. Status of the Claims**

In the Office Action mailed September 21, 2005, the Examiner rejected claims 1 and 3 under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 4,980,914 to Kunugi et al. (hereinafter referred to as "Kunugi") in view of United States Patent No. 5,850,453 to Klayman et al. (hereinafter referred to as "Klayman") and United States Patent No. 4,438,414 to Blachot (hereinafter referred to as "Blachot"). In addition, the Examiner rejected claims 4 and 5 under 35 U.S.C. §103(a) as being unpatentable over Kunugi in view of Klayman and Blachot further in view of United States Patent No. 6,108,430 to Kurisu (hereinafter referred to as "Kurisu"). By this amendment, Applicants amend pending claims 1, 3, and 5, cancel claim 4 without prejudice or disclaimer, and add new claim 6.

Reconsideration and withdrawal of the outstanding rejections are respectfully requested in view of the following remarks.

### **II. Claim Rejections - 35 U.S.C. § 103**

Claims 1 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kunugi in view of Klayman and Blachot. Without conceding the propriety of the rejection, claim 1 recites, *inter alia*, "wherein said attenuator means is operative to determine the attenuation of each of the left and right channel signals so that the following equations are satisfied:

$$SLO = (L \times ARR(z) - R \times ARL(z)) / (ALL(z) \times ARR(z) - ALR(z) \times ARL(z))$$

$$SRO = (R \times ALL(z) - L \times ALR(z)) / (ALL(z) \times ARR(z) - ALR(z) \times ARL(z))$$

$$L = SL \times BLL(z) + SR \times BRL(z)$$

$$R = SL \times BLR(z) + SR \times BRR(z)$$

wherein

SLO represents the amplified left channel difference signal,

SRO represents the amplified right channel difference signal,

SL represents the left channel signal,

SR represents the right channel signal,

ALL(z) represents an acoustic transfer function from the left speaker to a left ear of the listener,

ALR(z) represents an acoustic transfer function from the left speaker to a right ear of the listener,

ARL(z) represents an acoustic transfer function from the right speaker to the left ear of the listener,

ARR(z) represents an acoustic transfer function from the right speaker to the right ear of the listener,

BLL(z) represents an acoustic transfer function from the virtual left sound source position to the left ear of the listener,

BLR(z) represents an acoustic transfer function from the virtual left sound source position to the right ear of the listener,

BRL(z) represents an acoustic transfer function from the virtual right sound source position to the left ear of the listener, and

BRR(z) represents an acoustic transfer function from the virtual right sound source position to the right ear of the listener.”

Kunugi, Klayman, and Blachot are silent with respect to any teaching of acoustic transfer functions as recited in amended claim 1. Thus, the combination of Kunugi, Klayman, and Blachot does not teach or suggest an attenuator that is operative to determine the attenuation of each of the left and right channel signals so that the amplified left channel difference signal  $SL0$  and the amplified right channel difference signal  $SR0$  equations are satisfied with the described acoustic transfer functions as presently claimed. See *Office Action* pg. 11.

Claims 5 and 6 depend from independent claim 1 and are patentable over the cited prior art for at least the same reasons as is claim 1.

In light of the foregoing arguments, withdrawal of the rejection of claims 1 and 3 under 35 U.S.C. § 103(a) as being unpatentable over Kunugi in view of Klayman and Blachot is respectfully requested.

Claims 4 and 5 were rejected under 35 U.S.C. §103(a) over Kunugi in view of Klayman and Blachot further in view of Kurisu. Kurisu fails to overcome the deficiencies of Kunugi, Klayman and Blachot. Kurisu discloses various transfer functions for sound reproduction in a closed headphone system. See *col. 3, lines 25-30 and col. 4, lines 16-40 of Kurisu*. However, Kurisu is silent with regard to the claimed transfer functions shown in the equations which represent an acoustic transfer function from the virtual right sound source position to the left ear of the listener and an acoustic transfer function from the virtual right sound source position to the right ear of the listener, namely,  $BRL(z)$  and  $BRR(z)$ , respectively. Thus, without conceding the propriety of the rejection, claim 4 has been canceled and claim 5 depends from independent claim 1

and is patentable over the cited prior art for at least the same reasons as is claim 1 as detailed above.

In light of the foregoing arguments, withdrawal of the rejection of claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Kunugi in view of Klayman and Blachot further in view of Kurisu is respectfully requested.

### **III. Conclusion**

Applicants file a Request for Continued Examination with this amendment and therefore respectfully request entry of this Amendment under 37 C.F.R. § 1.116.

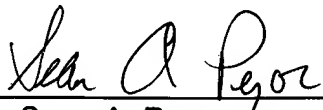
In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By:   
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Attachments: Request for Continued Examination